

# Memorandum

**TO:** TRANSPORTATION AND  
ENVIRONMENT COMMITTEE

**FROM:** Kerrie Romanow

**SUBJECT:** SEE BELOW

**DATE:** 11-15-11

Approved

*Jennifer Wade obo Ed Shibada*

Date

*11/22/11*

**SUBJECT: DECEMBER 2011 QUARTERLY PROGRESS REPORT ON ENERGY  
EFFICIENCY AND RENEWABLE ENERGY ACTIVITIES**

## RECOMMENDATION

Accept the quarterly update on the City's Strategic Energy Action Plan.

## OUTCOME

This quarterly report will inform the Committee on the progress of the City's energy efficiency and renewable energy activities as outlined in the adopted 2010 Strategic Energy Action Plan.

## BACKGROUND

The City of San José (City) has long been a leader in green policies and environmentally friendly programs. With Council adoption of the Green Vision in October 2007 and subsequent direction from Council regarding municipal energy actions, the City's focus on energy was aligned and strengthened with specific and aggressive goals related to the use of energy and renewables. The Strategic Energy Action Plan (see Attachment 1) was adopted by Council in June of 2010. The initial set of two year goals focuses on the built environment and identifies strategies and tactics for achieving the energy and renewable goals of the City's adopted Green Vision: Specifically, Green Vision Goals #2 and #3, reducing energy use by 50% per capita and receiving 100% of electricity from renewable sources, respectively. The Strategic Energy Action Plan activities also support other Green Vision Goals, including the creation of clean tech jobs (Goal #1), zero waste to the landfill (Goal #5), and zero-emission streetlights (Goal #9).

The Strategic Energy Action Plan is guided by the framework of the City's adopted Green Vision and provides actions in the areas of:

- Leading by Example

- Advocating Policies at the Regional, State and Federal Level
- Financing Mechanisms
- Forming Strategic Partnerships
- Communications and Engagement

The Strategic Energy Action Plan promotes broad environmental benefits, but also results in associated savings to the community and the City. The short and long term activities outlined in the Plan have already resulted in ongoing cost savings to City operations and the General Fund.

## **ANALYSIS**

The City's municipal and community energy efficiency and renewable energy programs are overseen by the Environmental Services Department (ESD) in collaboration with Public Works and an Interdepartmental Energy Team comprised of many City departments. A summary of the City's activities since the adoption of the Strategic Energy Action Plan in June 2010 is included in Attachment 2. Highlights and key issues and opportunities are provided below:

### **Leading by Example**

#### ***Energy Fund Update***

Approximately \$78,000 of first year annual energy cost savings was transferred into the Energy Fund in 2011-2012 along with approximately \$19,000 in associated rebates. Staff is finalizing a work plan for additional energy-efficiency projects at municipal sites that would be funded by the Energy Fund.

#### ***Energy Efficiency and Conservation Block Grant (EECBG) Updates (\$8,800,000 allocation)***

***Municipal Energy Efficiency (\$4,500,000 in EECBG Funding):*** The City is on track to achieve the goal of completing 50 energy audits and provide 71 retrofit projects at numerous City facilities by December 31, 2012, the end of the grant term. Currently, 48 audits have been completed. Of the 71 projects identified for EECBG funding, 24 are completed and 10 are currently underway. The implementation plan for the remaining projects (audits and installations) continues to be coordinated with the Public Works Department for completion by the end of the grant term. EECBG funds are used for internal labor costs, contractor costs, and to purchase energy efficient products/equipment.

***Department of Transportation (DOT) LED Streetlights (\$2,000,000 in EECBG Funding):*** Staff has been negotiating agreement terms with Schröder Lighting, LLC, the company recommended for the award of contract. On November 15, 2011, City Council will consider "Smart LED Streetlight System" with staff recommendation to execute an agreement with Schröder Lighting, LLC for the purchase of "smart" light emitting diode (LED) streetlights with a wireless communication monitoring and control system. Under this agreement, approximately \$1.4M in EECBG funds would be used to support the purchase of a total of about 1,500 smart LED

streetlights for installation along arterial and collector streets, where the greatest lighting efficiency and energy savings can be achieved. It is estimated that these conversions will result in an estimated annual energy cost savings of \$43,000 with a reduction of energy use by approximately 350,000 kWh/yr and green house gas emissions by over 240 metric tons of CO<sub>2</sub>. This figure does not reflect the additional energy savings derived from dimming the City's streetlights or operational savings achieved by switching to longer-lasting lights. Additionally, the LED streetlights being purchased through this agreement are eligible for rebates as part of the PG&E LED Streetlight Program and the rebate amount is estimated at \$95,000. EECBG funds would also be used for internal labor costs to complete streetlight installations. DOT has also leveraged Community Development Block Grant funds that will enable the purchase of an additional 500 LED streetlights.

*Solar on City Facilities (\$2,300,000 in EECBG Funding):* In July and August of this year, City staff continued negotiations on the Power Purchase Agreement (PPA) terms with SolarCity. On September 27, 2011, City Council accepted the staff recommendation to allow the City Manager to negotiate and execute final PPAs for the first 28 sites and any additional sites that meet the feasibility criteria. ESD staff is working with Public Works, client departments, and SolarCity to verify the site criteria, host community outreach meetings, and ultimately proceed with solar installations. Based on the results of the site criteria analysis (private activity, parkland, and cost-effectiveness issues), not all of the sites may prove effective for solar installations. EECBG funds are being used to cover consultant costs to conduct energy efficiency and solar audits and internal staff costs for the Request for Proposals (RFP) and implementation process.

*Solar at San Jose Environmental Innovation Center:* In addition to the solar sites mentioned above, staff is working to identify solar opportunities at the Environmental Innovation Center (EIC). Early work in the quarter was focused on securing financing options for solar at the EIC. In December 2011, Staff anticipates that the City Council will consider "United States Department of Commerce, Economic Development Administration Grant for Photovoltaic Panels and Related Equipment at the Environmental Innovation Center" with staff recommendation to execute a grant agreement with the United States Department of Commerce, Economic Development Administration to fund the San Jose Environment Innovation Center photovoltaic project in the amount of \$2,350,943, with a match from the City of \$1,007,547. EECBG funds will be used for consultant services to support the development of bid specifications and proposal/construction review and may be used to fund a portion of the system purchase. Staff is working to identify appropriate funds for the City match.

*Solar at Water Pollution Control Plant (WPCP):* The City began negotiations with SunPower in April 2011. After receiving a "best and final offer" from SunPower, City staff determined that the system cost for solar at the WPCP would not provide financial savings to the City over the 20 year life of the PPA. Given those findings, the City rejected all bids for solar at the WPCP on August 2, 2011 in accordance with San Jose Municipal Code Section 4.12.350. Staff will closely monitor the solar market to examine alternatives for solar and other renewable potential projects at the WPCP.

### ***WPCP Energy Saving Projects Pay Back***

The San José/Santa Clara WPCP received a rebate check for \$154,232 from Pacific Gas and Electric Company for two power and air heat recovery projects initiated by the Energy & Automation Division at the Plant. The waste heat recovery projects from Engine Generator EG-1 Silencer and Engine blower A1 Boiler qualified for rebates under PG&E's Retrocommissioning (RCx) Program, which focuses on improving the efficiency of a facility's existing equipment and control systems. With a total project implementation cost of \$398,500 and a total annual energy cost savings estimated at \$215,502, the investment in these two projects will be recovered in just over a year.

### **Advocating Policies at the Regional, State, and Federal Level**

On the State level, the City continues to actively monitor and, where appropriate, comment on legislation and regulation related to energy efficiency and renewables. Staff provided input into the update of the City 2011-2012 guidelines for legislative advocacy. Recommended additional guidance was centered on advocating for initiatives and additional funding mechanisms that would further the advancement of the City's Green Vision, including renewables and energy efficiency.

At the regulatory level, staff is working with the Local Government Sustainable Energy Coalition, on specific energy efficiency funding proceedings at the California Public Utilities Commission, attempting to ensure continued funding for community energy efficiency programs. The Coalition represents a unified voice for local governments, and has successfully educated State policymakers and regulators about the important role that local governments play in achieving both their local and California's energy efficiency goals.

### **Financing Mechanisms**

#### ***Municipal Energy Efficiency Project Financing Options***

Understanding that the current federal stimulus monies are scheduled to end on December 2012, and that there would be diminishing returns on the City's Energy Fund, staff has initiated research into a number of financing options for continuing City facility retrofits. A list of options is included in Attachment 3. Staff will continue to explore the viability of these options for the City.

#### ***Community Financing Programs***

*Commercial Property Assessed Clean Energy:* Recent announcements and policy steps at local and state levels aim to advance commercial energy efficiency but key questions remain: cost savings, jobs potential, emissions reductions, finance, and disclosure strategies which effectively stimulate the market. To that end, the City, in partnership with the Bay Area Climate Collaborative, Joint Venture: Silicon Valley Network, and the Silicon Valley Leadership Group will sponsor *Unlocking the Retrofit Market Commercial PACE and Other Finance Tools* on November 16, 2011. This event will deliver in-depth regional insight and dialogue with industry and government leaders on challenges and opportunities for accelerating commercial energy efficiency through these innovative strategies

*Community Choice Aggregation:* An initial feasibility study and recommendations report was presented to the City Council on October 25, 2011 with the recommendation from the Transportation and Environment Committee on September 12, 2011 that the report be accepted, and that the City not proceed with further Community Choice Aggregation efforts at this time. The Report was accepted by Council, with staff directed to:

1. Include more private industries and the private sector in future outreach; and
2. Return to the Transportation and Environment Committee and/or add to the Green Vision Work Plan an impact analysis regarding exploration of alternatives such as Smart Grid, Direct Access, and Feed-in-Tariff programs, including partnerships with the California Public Utilities Commission and PG&E.

### **Forming Strategic Partnerships**

#### ***San José to Host Waste to Energy Conversion Congress***

San José will be the host city for the second Waste to Energy Conversion Congress on December 6 and 7, at the Convention Plaza Hotel (formerly Crowne Plaza) in downtown San José. This event is a West Coast replication of a successful similar event in Philadelphia last year. The Congress focuses on funding energy conversion facilities, including public/private partnerships, permitting and regulation, commercialization of new waste to energy technologies, and showcasing emerging technologies. Representatives from the Federal Government (U.S. Dept of Agriculture and Department of Energy), regional regulators, including BAAQMD and the State of California, and local governments are scheduled to attend.

### **Communications and Engagement**

#### ***Bright Green San José***

Throughout the summer and fall, the City promoted energy efficiency and renewable energy initiatives through a variety of community events and activities listed below as part of its Better Buildings and Solar America Cities grant programs. In preparation for this extensive community outreach, ESD leveraged a portion of the Solar America Cities grant funding to develop a unique identity that would serve to unify all energy and other environmental initiatives citywide. The concept of *Bright Green San José* developed out of a workshop held in January 2011 with representatives from various City departments and some of our outside partners such as San Jose State University, San Jose Silicon Valley Chamber of Commerce, Silicon Valley Leadership Group, and Adobe Systems. The goal of the workshop was to create a citywide environmental identity to support the City's many varied environmental initiatives, and to do so in a manner that is consistent with the City's established brand and messaging. Under the *Bright Green San José* umbrella, the City hopes to further establish San José's innovative Green Vision environmental initiatives and all of the City's environmental efforts as leading the country in driving new clean technologies and sustainable environmental initiatives.

#### ***Better Buildings Program***

On Tuesday September 27, the Better Buildings Program, with support from the Strong Neighborhood Initiative, held a workforce training event at the Boys and Girls Club, Smythe Clubhouse in District 8. Local trade schools and adult education providers gave presentations on

their “green collar” job training programs. Sixty-one people attended the early morning event that was promoted with the slogan “Get the Skills to Pay the Bills.” Due to the great demand, a similar event will be held in December. Green Collar jobs reduce waste and pollution, benefit the environment, and are the fastest growing job arena. The Better Buildings Program is a pilot run by the Environmental Services Department and is made possible by grant funds from the Federal Department of Energy. Better Buildings San José focuses on bringing energy efficiencies to low and moderate income families in the Hillview-TOCKNA (Tully, Ocala, Capitol, King Neighborhood Association) community and supports the City’s Green Vision goals to create 25,000 clean tech jobs and reduce per capita energy use by 50%. The original goal of the program was to complete 45 energy efficiency retrofits. To date, more than 130 energy efficiency retrofits have been completed for area residents. The program now expects to achieve 300 retrofits by the end of the grant term in fall 2012.

### ***Solar America City Activities***

The City of San Jose Solar America City project will end on December 31, 2011. The original objective of this Department of Energy grant funded project was to support goal #3 of the City’s Green Vision, which is to receive 100% of the City’s electrical needs from renewable resources by 2022. Over the 24-month period of the grant term, the City developed and implemented numerous innovative and replicable programs and strategies to foster community involvement to spur solar market penetration and assist in achieving the goals of San José’s Green Vision. Key objectives of the Project were to:

- Provide coordinated education and outreach activities on energy financing strategies to property owners;
- Increase awareness of the viability and range of solar technologies and opportunities by ensuring the community has a mixture of hands-on and other educational opportunities; and
- Increase available resources for green collar workforce training.

The City has been very successful in meeting the Solar America City objectives. Highlights of the grant program include:

- ***Innovative Financing Tools:*** After the City initiated a successful employee solar group buy model entitled “*SunShares*,” the City worked with the Bay Area Climate Collaborative (BACC) to continue to drive SunShares outreach, visibility, and education in the Bay Area. BACC is facilitated the development of the Technology Credit Union’s “*SolarSmart*” product, low cost financing for solar, which is offered to its more than 74,000 members ([www.techcu.com](http://www.techcu.com)). KeyPoint Credit Union became an official sponsor of SunShares and is also developing a financing package to their 55,000 members. Several cities in the Bay Area have expressed interest in coming together to offer a SunShares-type program to their community. Cities include: Oakland, Hayward, Palo Alto, Saratoga, Sunnyvale, Fremont, and the counties of Sonoma and Monterey (Combined population total: 1,882,345). BACC continues to have conversations with these communities about SunShares.

- **Workforce Training:** Coordinated with 10 local high schools to schedule and host workforce development trainings for at-risk-youth. The Solar America City program provided workshops for approximately 250 at-risk youth students from continuation/alternative high school programs. The workshops covered solar basics, followed by a guided tour of the Showcase, concluding with an apprenticeship/career opportunities discussion from the International Brotherhood of Electrical Workers (IBEW).
- **Effective Awareness and Outreach:** Local, regional, and national publications have run stories about the City's Solar Program including the Mercury News, Sierra Club, and several technology focused websites. These stories helped generate international interest about the Showcase. As a result of this effort, the Showcase hosted tours for European Commissioners, Russian energy entrepreneurs, Italian investors, Chinese government officials, as well as a local government delegation from New Zealand. The Sierra Club ran a series of stories about the Green Vision and Clean Energy Showcase: <http://www.sierraclubgreenhome.com/success-stories/northern-california-city-reinvents-itself-as-green/>
- **Solar Home Tours:** The City hosted a solar home tour on October 1 to acquaint residents with solar technologies that can reduce monthly energy bills. One dozen home owners welcomed tour participants into their homes to talk about available incentives, the different types of solar technologies they installed, and how much money they are saving. As part of the non-profit American Solar Energy Society (ASES) National Solar Tour, the world's largest grassroots solar event, the free tour attracted nearly 400 participants locally. Last year's National Solar Tour attracted more than 150,000 people in 49 U.S. states and Puerto Rico. As one of the 25 designated Solar America Cities, the City partnered with several organizations to host this year's tour, including the U.S. Department of Energy, ASES, local solar companies including Clean Solar, Freedom Solar, REC Solar, SunWize, and San José residents.
- **Green Vision Clean Energy Showcase:** The Showcase has been the "jewel" in the City's crown of achievements with the Solar America City project. Viewed by more than 6,500 individuals since opening in December 2010, the Showcase has provided increased knowledge on the availability of clean energy technologies to local, state, and international students, businesses, and interested individuals. Surveys conducted post-visit have indicated that attendance at the Showcase has directly inspired homeowners and businesses to install solar.

## **EVALUATION AND FOLLOW-UP**

Updates and progress on the Strategic Energy Action Plan will be reported to Council through the existing Green Vision process and quarterly reports to the Transportation and Environment Committee.

### **PUBLIC OUTREACH/INTEREST**

- ☐ **Criteria 1:** Requires Council action on the use of public funds equal to \$1 million or greater. **(Required: Website Posting)**
- ☐ **Criteria 2:** Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- ☐ **Criteria 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. **(Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)**

This recommendation does not meet any of the criteria listed above. Staff has coordinated with key stakeholders in the development of this report.

### **COORDINATION**

This memorandum and attached Strategic Energy Action Plan have been coordinated with the City Manager's Office and the City's Interdepartmental Energy Team, which includes representatives from the Departments of Finance; Parks, Recreation and Neighborhood Services; Planning, Building, and Code Enforcement; Public Works; Library; Airport; Transportation; Fire; Police; along with the Offices of Economic Development, City Attorney, Intergovernmental Relations, and City Manager's Budget Office.

### **COST IMPLICATIONS**

More than 80% of the City's municipal and 100% of the community energy activities are funded through various federal, state, or utility grants and contracts. The City's Solar America City program will end in December 31, 2011, with the remaining energy grants ending by December of 2012.

ENERGY PROGRAM GRANT	AMOUNT	TERMINATION	GRANT FUNDED STAFF
DOE/Solar America City	\$1,301,631	December 2011	ESD-3
DOE/Better Buildings Program	\$750,000	September 2012	ESD-4
DOE/Local Energy Assistance Program	\$299,983	November 2012	ESD-1
DOE/EECBG	\$8,840,600	December 2012	ESD-2 PW-2 FIN-1 CAO-0.5
PG&E/Silicon Valley Energy Watch and Innovator Pilot	\$1,747,035	December 2012	ESD-2



First and second year savings achieved as a result of the municipal retrofit projects are put in the City's Energy Fund and used to support the City's Energy Officer and for reinvestment in additional energy improvements (e.g. LED building lighting, HVAC, and control projects in City facilities). The fund has already been utilized to support energy improvement projects in City Hall and select Fire Stations. Staff is also identifying other financing opportunities for additional projects. It is important to note that staff's ability to continue to implement future energy improvement projects will be severely impacted with the completion of the EECBG grant. This impact may be further exacerbated by additional future reductions to the City Energy Fund e.g. \$100,000 from the City Energy Fund was redirected to the City's General Fund in the FY 2011-2012 Budget; resulting in a reduced ability to cut back the City's energy consumption and provide ongoing savings to the General Fund.

**CEQA**

Not a project, File No. PP10-069 (a) staff report that involves no approvals of any City actions.

/s/

Kerrie Romanow

Acting Director, Environmental Services

For questions please contact Mary Tucker, Environmental Services Program Manager, at (408) 975-2581.

Attachment 1: Adopted Strategic Energy Action Plan

Attachment 2: Fourth Quarter Status Report on Strategic Energy Action Plan items –  
September 2011

Attachment 3: Municipal Energy Project Financing Options